Complete Summary

GUIDELINE TITLE

Early discharge of the term newborn.

BIBLIOGRAPHIC SOURCE(S)

National Association of Neonatal Nurses. Early discharge of the term newborn. Glenview (IL): National Association of Neonatal Nurses; 1999. 33 p. [48 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

General health of term newborns and their mothers

GUIDELINE CATEGORY

Management

CLINICAL SPECIALTY

Nursing
Pediatrics

INTENDED USERS

Advanced Practice Nurses
Nurses

GUIDELINE OBJECTIVE(S)

- To provide a framework for the selection of interventions for managing the early discharge of the normal, term newborn
- To provide the foundation for specific nursing protocols, policies, and procedures that individual institutions may further develop

TARGET POPULATION

Healthy, term newborns and their families

INTERVENTIONS AND PRACTICES CONSIDERED

1. Early (within 48 hours of birth) hospital discharge of healthy term newborn
2. Family-centered maternity care
3. Nursing interventions to facilitate the potential for enhanced health maintenance of the infant, including physiologic and behavioral interventions (ie., standard newborn care, vaccination, metabolic screening, promotion of mother infant attachment, anticipatory guidance), nutritional interventions (ie, breastfeeding, bottlefeeding) and safety interventions (ie, hospital discharge instructions, car seat use, and follow-up care).

MAJOR OUTCOMES CONSIDERED

- Infant: Physiologic-behavioral stability at discharge and follow-up
- Family: Demonstration of an adequate knowledge base for infant care and safety.

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The MEDLINE, Cochrane, and Vermont Oxford databases were searched by the guideline developer using the keywords early discharge, homecare, and neonate.

NUMBER OF SOURCE DOCUMENTS

Approximately 200

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Subjective Review

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The American Academy of Pediatrics volunteered to review the initial drafts of the document. In addition to the NANN Board of Directors who reviewed these guidelines prior to publication, other contributors and reviewers are recognized in the guideline document for their assistance.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Suggested Interventions to Facilitate the Potential for Enhanced Health Maintenance of the Infant

The interventions are not listed in order of performance. Specialty medical and nursing organization standards, together with hospital policies, dictate the protocols used to provide family-centered care (Als & Brazelton, 1981 [not found on the reference list]; National Association of Neonatal Nurses [NANN], 1995). The infant's wellness responses determine the level of surveillance that is required after delivery in the hospital and after discharge at home. The need for anticipatory guidance and the areas in which guidance is needed are determined by the infant's family. Underlying rationale for recommending these interventions is provided in the guideline document.

Physiologic and Behavioral Interventions

1. Standard Newborn Care - initiated in the delivery room and continued until discharge includes:
    a. Initial physical assessment
        - Prenatal, intrapartum, neonatal history
        - Apgar score
        - Inspection for physical abnormalities
        - Signs of appropriate gestational age and size
    b. Thermoregulation (NANN, 1997)
        - The newborn is maintained under a radiant warmer, servo control mode set at 36.5Âº to 37.0ÂºC until stable
        - Stable newborns are dressed, swaddled, and placed in an open bassinet
        - Discharge teaching: Parents are taught to dress the infant appropriately for the weather and home environmental changes
    c. Physical examination
        - General appearance, posture, color, respiratory effort, appearance of skin, vital signs and measurements, newborn characteristics, reflexes, behavioral state, review of all major organ systems (Poland, 1990).
        - Examination is conducted either in the delivery room or upon admission to the nursery. There should be another examination close (within a few hours) of the infant's expected discharge
    d. Discharge teaching
        - Well-planned, follow-up care is individualized to meet the family's needs. Infants discharged at fewer than 48 hours of age must be seen within 48 hours by a health care professional who is competent in newborn assessment.
2. Pulmonary and Cardiac Responses
    a. The infant is positioned to facilitate the maintenance of a patent airway.
    b. A bulb syringe device and wall suction should be available in the hospital setting.
    c. Discharge teaching: parents are taught how to position the infant to clear the airway.
3. Hyperbilirubinemia (American Academy of Pediatrics [AAP], 1994; Ryan, 1993; Tan, 1991)
    a. History: details of pregnancy, including mother's general health, blood type, diabetes, hemolytic anemia, gallstones, splenectomy, medications, and familial disorders.
    b. Physical examinations and assessment: infant cry; color; activity; presence of petechiae, and ecchymosis; hepatosplenomegaly; neurologic status as indicated by tone and reflexes, overall hydration and nutritional status, including weight, intake, and output.
    c. Laboratory studies: complete blood count, including reticulocyte count; peripheral smear; blood type of mother and infant; Coombs test; and a fractionated bilirubin.
    d. Management: phototherapy, hydration, and exchange transfusion.
4. Polycythemia
    a. Clinical signs and symptoms to be monitored include: plethora, lethargy, vomiting, hepatomegaly, jaundice, respiratory distress, and oliguria (Bell, 1999; Nurses Association of the American College of

Obstetricians and Gynecologists [NAACOG], 1991; Tappero & Honeyfield, 1996)

b. Blood glucose and calcium levels are monitored on all infants with a venous hematocrit of more than 65.
c. Discharge teaching
    - Parents are taught signs that indicate the infant needs to be evaluated.
    - Parents are taught appropriate follow-up care.

5. Sepsis - evaluation of infant at risk for sepsis includes:
    a. History: maternal GBS status, length of rupture of membranes, maternal signs and symptoms of illness.
    b. Physical assessment: color, tone, respiratory effort, temperature instability, apnea.
    c. Laboratory studies: complete blood count, blood culture. Tracheal aspirate, urine culture, and lumbar puncture may be indicated.
    d. Discharge teaching: Parents are taught signs and symptoms of illness and proper use of thermometer (Graven, Cuddeback, & Wyble, 1999)
6. Vaccination - Hepatitis B (Meyers, 1991; Poland, 1990)

    Centers for Disease Control Guidelines (CDC, 1991) recommend universal vaccination of newborns in the United States, regardless of the mother's hepatitis B surface antigen (HbsAg) status.

    If mother is HBsAg positive, the recommendation is to give the vaccine within the newborn period, preferably before the infant's hospital discharge. The first dose of 0.5 ml vaccine is to be administered IM within 12 hours of birth (CDC, 1991; Meyers, 1991). The same protocol follows for the next two doses: the second dose administered one month after the first; and the third dose 6 months after the second.

    Infants born to mothers who are HBsAg positive should also receive 0.5 ml hepatitis B immunoglobulin (HBIG) prophylaxis, concurrently with, but at a different site, than the vaccine.

    Requirements for permanent vaccination records and for reporting of selected events after vaccination was established by the National Vaccine Injury Act (1988).

    Discharge teaching: Follow-up activities vary, but parents must be instructed to keep all immunization records securely.

7. Metabolic Screening

    Phenylketonuria (PKU) is an error of metabolism in which the amino acid phenylalanine, essential for metabolism, is not utilized (AAP, 1997).

    a. Practitioners must be aware of regulations in their states.
    b. Discharge teaching: Parents are taught appropriate follow-up for repeat testing, evaluation, and treatment when needed.
8. Promoting Mother-Infant Attachment

a. Opportunities for family-centered care will be provided in maternity settings. Attachment behaviors will be facilitated by:
    - Rooming-in
    - Flexible family visit schedules
b. Discharge teaching:
    - Parents are taught how to meet the developmental needs of the normal newborn.
    - Positive attachment behaviors are discussed and supported.

9. Promoting Anticipatory Guidance
    a. Sleep patterns of newborns
        - Newborns sleep approximately 12 to 16 hours for 1 to 4 weeks.
        - Newborn sleep states differ: deep sleep, light sleep, and drowsiness.
        - Within 4 to 6 weeks, the infant will start to differentiate between day and night.
        - It is not necessary to wake the infant to feed.
    b. Behavioral cues: responses to touch, talking to newborn, and visual stimulation are different in all newborns.
    c. Newborn vision: The newborn has vague vision at birth. Any interaction with newborns should consider their visual range at birth.
        - The newborn's vision is limited to a field range and distance of 4 to 6 feet.
10. Circumcision (AAP, 1997) - Standard circumcision criteria include:
    a. Evidence of voiding prior to the procedure. (Evidence of voiding after the procedure is an institution-specific criterion.)
    b. Evidence of no gross physiologic abnormality of the genitalia.
    c. No excessive bleeding from the circumcision site for a minimum of two hours prior to discharge.
    d. Discharge teaching:
        - Parents are taught routine care of the surgery site.
        - If early discharge occurs prior to post-circumcision voiding, parents are provided with specific information for follow up.

Nutritional Interventions

Breastfeeding is the recommended method of providing nutrition for the infant. It is encouraged through education and support (NAACOG, 1991) (Not in the reference list).

1. Breastfeeding Management - maternal instruction prior to initiation of feeding includes (Conte, 1992; Occupational Safety and Health Administration [OSHA], 1991):
    a. Handwashing
    b. Cleansing the breasts with warm water
2. Colostrum (NAACOG, 1991)

    Initiate breastfeeding early with the early intake of colostrum. The milk supply usually begins by the third day.

3. Positioning and Feeding (NAACOG, 1991)
    a. Select the position of comfort
        - Cradle position

        - Clutch position
        - Slide-lying position
    b. Bring the infant close to the breast, grasp the nipple, and touch it to the infant's cheek. Place as much of the dark area of the breast in the infant's mouth as possible
    c. Make sure the breast is not blocking the infant's nose, so the infant can breathe. The tip of the infant's nose should touch the breast.
    d. The mother inserts her finger in the corner of infant's mouth to interrupt the feeding.
    e. Nurse the infant at both breasts at each feeding. Alternate the breast offered first since the infant nurses more vigorously at the first breast. Burp the infant after each breast.
    f. Frequency and duration of feedings
        - The breastfed infant may nurse 8 to 12 times in a 24-hour period, generally 10 minutes per breast.
    g. Estimating feeding adequacy which can be determined by:
        - Number of wet diapers
        - Number of stools
        - General behavior
    h. Breastfed newborns: issues related to working mothers:
        - Surrogate caretakers
        - The newborn's reaction to bottle feeding
4. Breast Care (NAACOG, 1991)
    a. Daily inspection for cracks, drainage, or bleeding
        - If these symptoms present, the breasts should be exposed to the air for 5 to 10 minutes, 3 to 4 times a day to promote healing.
        - Protective ointments should not be used routinely. The breasts have oil glands, and the use of ointment can make the nipple less tough.
5. Removal of Milk from Breast (NAACOG, 1991)
    a. Interruption of breastfeeding may require removal of milk from breast.
    b. Indications include:
        - Maternal illness
        - Infant illness
        - Maternal socialization
        - Maternal employment
    c. Milk is removed from the breast by two methods:
        - Manual expression which requires use of both hands, is inexpensive, and allows for skin-to-skin contact that may increase milk supply.
        - Mechanical pumping - manual pumps increase hormonal stimulation and can extract milk from both breasts simultaneously.
        - Mothers are taught both methods.
    d. Mothers are taught to become familiar with the instructions on the pump. Each pump is different. Cylinder-type pumps are recommended.
6. The Pumping Process (NAACOG, 1991)
    a. Start by massaging the breasts.
    b. Switch breasts 2 to 3 times while you are pumping.
    c. Pump 10 to 20 minutes per breast.
    d. Collect only enough milk for one feeding.
7. Milk Storage (NAACOG, 1991; Conte, 1992)

a. Store breast milk in clean plastic bottles with lids. The bottles must be dated.
b. Defrost frozen milk by running warm water over the bottle, by putting the bottle in a pan with warm water, or by defrosting in the refrigerator. Do not defrost it in the microwave.
c. Do not leave breastmilk out at room temperature.
d. Do not boil the milk.

8. Breast Pump Care
    a. Wash pump parts with dishwashing soap in hot water
    b. Rinse well
    c. Air dry
9. Maternal Concerns
    a. Flat or inverted nipples.
        - Assess nipples for feeding.
    b. Engorgement
        - Nurse the infant frequently (every 1-1/2 to 3 hours).
        - Apply moist compresses; shower prior to nursing.
        - Ice pack to breasts after nursing may relieve discomfort.
        - A larger bra can be worn for comfort.
    c. Sore or cracked nipples
        - Teach proper latch-on.
        - Air dry breasts after feeding.
        - Massage hindmilk into nipple and areola.
        - Avoid soaps and materials that dry and irritate the skin.
        - Avoid plastic bra liners and bra pads.
        - Change milk pads frequently.
    d. Plugged ducts (results in a tender lump not softened by nursing)
        - Apply moist heat prior to nursing.
        - Give frequent feedings.
        - Avoid use of a constricting bra.
        - Massage breast during feeding.
        - Assess for mastitis: fever, chills, malaise, body aches, nausea and vomiting, warm area on the breast, erythematous streak on the breast.
    e. Discharge teaching:
        - Service options depend on factors that include insurance plan and rural or urban settings. Nurses and health team members must be familiar with resources available for clients to promote breastfeeding and enhance the health maintenance of the childbearing family. Assess the mother's needs.
        - Services available to the lactating mother are provided in the guideline document.
10. Breastfeeding Recommendations

    The following recommendations are essential for successful assessment, intervention, and outcomes for the promotion of wellness in the maternal-child dyad and family.

1. Maternity clients and families require teaching and counseling regarding infant feeding regardless of maternal gravida.
2. The benefits of breastfeeding and bottle-feeding are presented as a basis for decision making regarding infant feeding.

3. Infant feeding is an area of care often associated with emotional overtones.
4. Factors that influence feeding decisions include culture, age, educational level, spousal attitude, previous experience, role models, and support.
5. A comprehensive tracking plan that covers all aspects of breastfeeding is an effective method of providing information regarding breastfeeding for the childbearing family.

Support services and referrals should be available to promote effective breastfeeding. Follow-up care arrangements provide services if health related problems should develop (Locklin & Jansson, 1999).

Written discharge instructions are available and reviewed with the mother and family prior to discharge.

Individual dietary needs of the breastfeeding mother are provided. The relationship of alcohol and caffeine to the well being of the infant are presented. The lactating mother understands the reason to avoid the consumption of these products. The contraindications to taking over-the-counter medications are reviewed. Under certain conditions, prescription medications may be taken with the approval of the physician or advanced practice nurse.

Discharge teaching: the lactating mother is warned not to take any medication without advice from her care provider.

11. Bottle-Fed Newborns

Bottle-feeding refers to the use of bottles for feeding commercial formula rather than using the breast (NAACOG, 1991a). Bottle-feeding is an acceptable method of feeding the newborn.

- Bottle-feeding should not be hurried. Each feeding should take at least 20 minutes to provide oral gratification.
- Infants can be fed on demand
- The newborn learns to bottle-feed.

The bottle-fed infant requires burping after each ounce of formula.

- Hold newborn for feedings.
- Do not prop the bottle.
- Position the infant on the right side with a blanket roll behind his back.

Boiling bottles and formula is not recommended unless local water supply is unsafe. Bottles and nipples should be washed in hot, soapy water and allowed to air dry. Bottles also may be washed in an automatic dishwasher.

Safety Interventions

1. Hospital Discharge Instructions: Nurse's Role

a. Prevent infections (Conte, 1992; OSHA, 1991).
    - Practice standard precautions.
    - Handwashing is the single most important measure to prevent infection.
b. Give parents hospital resource telephone number.
    - Parents are given the postpartum telephone number or the nursery telephone number.
    - Parents are urged to call to clarify questions regarding home care for mother and infant.
c. Make appointments for follow-up care for mother and infant (Arnold & Bakewell-Sachs, 1991; Keppler & Roudebus, 1999; NANN, 1997c, d).
d. Give separate written discharge instructions for mother and infant.

2. The Infant's Home Environment: Parent's Role
    a. The infant is always under the surveillance of a responsible adult.
    b. The crib and bedding are adequate and conform to established safety standards.
        - Standards for cribs relate to lead-free paint, the distance between crib slats, and mattress fit.
        - Parents are cautioned not to use pillows, soft bedding, or sheepskins.
    c. Toys are age-appropriate and conform to safety standards and recommendations.
        - Mobiles and other crib toys with strings should be hung high enough not to become entangled with the active infant.
        - Small, soft, washable toys are appropriate to be placed in the crib.
    d. A sponge bath is given until the umbilical cord area has healed.
        - Alcohol is applied to the cord stump and attachment area until healing has occurred.
        - After the umbilical cord area has healed, the infant may be given a tub bath. Water temperature must be checked before placing the infant in the bath.
        - Test the temperature by placing your forearm in the water. If it feels comfortable, place the infant gently in the water.
        - The hot water heater is set no higher than 120Â°F.
3. Sibling Involvement
    - Anticipatory guidance that is age-appropriate helps a sibling adjust to the new infant.
    - Siblings older than three years can be prepared for the new infant. Although they need a great deal of surveillance, they can be given a role as helper and made to feel they are very important to the baby.
4. Car Seats (Robinson, 1991; Rorden, 1990)

    An infant car seat is always used when the infant rides in an automobile.

    - Use safe car seats that are federally approved. Read manufacturer's directions and follow them exactly.
    - Use backward-facing car seats for infants up to 17 pounds (AAP, 1993)
    - Infant car seats should not be placed in front seats with passenger air bags.
5. Daycare Options

Daycare options are explored, and the mother selects the option that best meets her needs.

- The nurse should discuss the available options and the advantages of each.
- The nurse should refer the mother to the appropriate agency as needed.

6. Smoking Environment

   Parents are informed of the effects of secondhand smoke on the infant (Martinez, Cline, & Borrows, 1992).

7. Follow-up Care Options (Arnold & Bakewell-Sachs, 1991; NANN, 1997).

   Follow-up care options depend on location, parents' employment, and insurance coverage. Resources include referral and advocacy for the following:

   - Federal: Medicaid, Home Health Services
   - Federal and State: Supplementary Security Income (SSI), Women, Infants, and Children (WIC) Programs
   - State level: Department of Public Health

   Local level: Classes and services offered in mother-infant clinics, well-baby clinics, local social services, religious groups, Parents Anonymous, hot lines, LaLeche League, March of Dimes, SIDS groups, and parent support groups.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Practice guideline on early discharge of the term newborn are based on established criteria of family-centered care. A comprehensive, individualized plan that is compatible with family needs increases the potential for enhanced health maintenance of the infant.

The expected benefits at discharge and on follow-up visits include:

Promotion of the infant's ability to demonstrate physiologic-behavioral stability at discharge and follow-up as evidenced by:

- Normal vital signs
- Voiding
- Passing stools
- Appropriate developmental activity
- Strong cry
- Normal sleep-wake cycles
- Establishing feeding patterns
- Feedings tolerated regardless of method used
- Appropriate growth and weight gain
- No signs or symptoms of illness

Promotion of the family's ability to demonstrate:

- an adequate knowledge base for infant care
- realistic expectations for infant care
- an understanding of infant's nutrition needs
    a. Breastfeeding infants will breastfeed effectively.
    b. Formula-fed infants will tolerate formula feeding.
- provision for a safe environment for the infant
    a. Parents will use health maintenance measures to prevent illness and accidents.
    b. Parents will know when to seek medical attention for alterations in the infant's status.
- increased satisfaction in the discharge period.
- a good adjustment to home.
- proper use of car seats prior to discharge.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

The interventions are not listed in order of performance. Specialty medical and nursing organization standards, together with hospital policies, dictate the protocols used to provide family-centered care. The infant's wellness responses determine the level of surveillance that is required after delivery in the hospital and after discharge at home. The need for anticipatory guidance and the areas in which guidance is needed are determined by the infant's family.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

National Association of Neonatal Nurses. Early discharge of the term newborn. Glenview (IL): National Association of Neonatal Nurses; 1999. 33 p. [48 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1999

GUIDELINE DEVELOPER(S)

National Association of Neonatal Nurses - Professional Association

SOURCE(S) OF FUNDING

National Association of Neonatal Nurses (NANN)

GUIDELINE COMMITTEE

Education and Practice Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Roberta Cavendish and Lori Jackson

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

An update is not in progress at this time.

GUIDELINE AVAILABILITY

Electronic copies: Not available at this time.

Print copies: Available from the National Association of Neonatal Nurses (NANN), 4700 W. Lake Avenue, Glenview, IL 60025-1485. An order form is available at the NANN Web site.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on February 28, 2000, 1999. The information was verified by the guideline developer on March 10, 2000.

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